

July 23, 2014

Mr. Jason Ridgway, Director
Office of Highway Development
Maryland State Highway Administration
707 North Calvert Street, C-102
Baltimore, Maryland 21202

Attention: Ms. Catherine Agostino, Chief, ERD

Reference: Garrett Park Safe Route to School Project
Scope of Services and Fee Proposal – Initiation thru 100% PS&E Design
Contract No. BCS 2011-09B, Task 16; CEI #111-138.16; FMIS: HS206B21

Dear Mr. Ridgway,

Century Engineering, Inc. (Century) is pleased to submit our scope of services, estimated man-hours and price proposal to provide Engineering Services necessary to prepare 100% design plans for the Town of Garrett Park Safe Route to School (SRTS) project. The SHA Project Manager for this assignment is Ms. Jessica Silwick. The design will be performed over a period of one year from Notice to Proceed.

Our MBE sub-consultant Sabra Wang & Associates, Inc. (SWA) will be the lead on this project. Century will provide Stormwater Management (SWM) design as well as Erosion & Sediment Control (E&S) designs.

In addition, Century will provide oversight/coordination services of Sabra Wang Associates. We have conducted man hour negotiations with Ms. Mary Davidson and Mr. Dustin Kuzan that have resulting 2,064 man hours.

We propose to perform the Scope of Services for a cost plus fee not to exceed \$150,526.00. This fee includes \$74,587.96 (49.55%) proposed by our MBE sub-consultants, Sabra Wang & Associates, Inc. Century looks forward to providing continued engineering services to the State Highway Administration on this challenging project. Should you have any questions or need additional information, please do not hesitate to contact me at 443-589-2430, or Majid Abedi at 443-589-2424 or by email.

Respectfully Submitted,

CENTURY ENGINEERING, INC.



Anthony R. Frascarella, P.E.
Vice President

ARF/tf

MARYLAND DEPARTMENT OF TRANSPORTATION
COST AND PRICE SUMMARY - CONSULTANT SERVICES CONTRACT

AVERAGE HOURLY RATE

Consultant Century Engineering, Inc.
Subconsultant _____

AVERAGE HOURLY RATES

	Classification	Average Hourly Salary		Hours		Extension
1.	<u>Supervisor</u>	<u>\$80.00</u>	x	<u>20</u>	=	<u>\$1,600.00</u>
2.	<u>Project Manager</u>	<u>\$67.71</u>	x	<u>91</u>	=	<u>\$6,161.61</u>
3.	<u>Project Engineer</u>	<u>\$54.85</u>	x	<u>262</u>	=	<u>\$14,370.70</u>
4.	<u>Designer</u>	<u>\$37.82</u>	x	<u>177</u>	=	<u>\$6,694.14</u>
5.	<u>CADD Operator/Tech</u>	<u>\$28.66</u>	x	<u>0</u>	=	<u>\$0.00</u>
6.	<u>Landscape Architect</u>	<u>\$35.00</u>	x	<u>0</u>	=	<u>\$0.00</u>
7.	<u>Construction Mgr</u>	<u>\$56.48</u>	x	<u>0</u>	=	<u>\$0.00</u>
8.	_____	_____	x	_____	=	_____
	Total			<u>550</u>		<u>\$28,826.45</u>

Average Rate equals Extension divided by Hours \$52.41

State Highway Administration - Consultant Services for the Highway Design Division
Section II Man-hour Forms - Phase IV Final Design

Project: Garrett Park Sidewalk Improvements

Contract No.: BCS 2011-09B

Firm(s): Century Engineering

Number & Type(s) of Interchange(s):

Type of Improvement(s)	Location (s)	Mileage	Man-hour summary
Two (2) lane roadway, Open section.	Garrett Park Sidewalk Improvements	0.6 Miles	
Two (2), four (4) or five (5) lane divided or undivided highway, closed section.			
Four (4) or six (6) lane divided highway, Closed section.			
Interchange Ramps (Number of Ramps =).			
Reconstruction of 5th and 6th lane, outside widening, Open section.			
Reconstruction of 5th and 6th lane, Inside widening with barrier section.			
Reconstruction of 5th and 6th lane, Inside widening open media.			
Reconstruction of closed section.			
New construction of entrance or frontage road.			
Parking Lot.			
Other			

State Highway Administration - Consultant Services for the Highway Design Division
Section II Man-hour Forms - Phase IV Final Design

Project: Garrett Park Sidewalk Improvements

Contract No.: BCS 2011-09B

Firm(s): Century Engineering - Highway

Number & Type(s) of Interchange(s):

	Supervisor	Project Manager	Project Engineer	Designer	CADD Technician			Total
Phase IV Final Review to Constructibility Review								
								0
								0
								0
								0
								0
								0
								0
Sub-total =	0	0	0	0	0	0	0	0

TOTAL MAN HOURS	SWM	41	192	177		0	0	410
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SUBCONSULTANT OVERSIGHT/COORDINATION (BASED ON % OF MBE IN TASK)	20	50	70		0	0	0	140
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GRAND TOTAL MAN-HOURS PHASE IV HIGHWAY	20	91	262	177	0	0	0	550
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Stormwater Management (SWM) and Erosion & Sediment Control (E&S)

The task will include the determination of the SWM water quality and quantity requirements for the proposed new sidewalk for Kenilworth Avenue and Oxford Street and retrofit of the existing sidewalks along Montrose Avenue, Clermont Avenue. Areas of sidewalk reconstruction to meet ADA criteria within the existing sidewalk footprint are assumed to be a maintenance activity and will not increase the SWM required. Areas of new sidewalk or widening of existing sidewalk outside of the existing sidewalk footprint are assumed to be subject to the New Development requirements. An increase in impervious area is anticipated in all areas. It is assumed that water quality will be addressed by up to two micro-scale ESD practices and quantity will be addressed through variances at all points of investigation (POIs) where there is a net increase in impervious.

Task 1 - Review of Existing Data and Preparation for Field Work

Century will download and review all available GIS data from SHA, Montgomery County and the Town of Garrett Park and any available construction plans. Other sources of information (Bing Maps Birds Eye View and 3D Google maps) will be used to plan for the initial site visit.

After reviewing the information available, Century will prepare for the site visit, which will include preparing mapping, approximating drainage area divides and preparing a preliminary determination of the points of investigation throughout the project location.

This task includes time for one (1) kick-off meeting at the site with project representatives to discuss the project. It is assumed that this meeting will be attended by one (1) Water Resources Engineer from Century.

Task 2 – Drainage Site Assessment

Century will conduct an on-site assessment to verify drainage patterns and points of investigation, document the stability of the outfalls, and assess the sites for feasible locations for stormwater management BMPs. The field investigation will also identify any areas of excess pavement that can be removed in lieu of or in addition to providing stormwater BMPs. This proposal includes one (1) day to conduct the on-site assessments utilizing a two (2) person assessment crew. Century will also evaluate additional topographic survey needs and assist in preparing a survey request to SHA for SHA or others contracted by SHA to perform. Century will coordinate rough stormwater concepts with SHA-HHD for concurrence prior to progressing with 30% design.

Task 3 – Preliminary Design (30% Design Phase)

Century will prepare the following SWM and E&S items and submit to SHA-HHD for their review and comment. After SHA-HHD acceptance, an initial submission to MDE will be made.

Storm Drain Analysis

Century will analyze proposed curb locations to ensure spread requirements are met. For the purpose of this proposal it is assumed that the spread requirements will be met and no detailed storm drain and outfall design is included.

Stormwater Management Design

Century will prepare mapping showing the points of investigation at every location where runoff leaves the LOD or ROW. Drainage area divides between the POI's will be identified and the areas of new pavement, reconstructed pavement and pavement removal to each POI will be

quantified in order to determine SWM requirements. Century will complete the Water Quality Summary Sheet and prepare Water Quality Maps. A total of nine POIs are anticipated.

Century will evaluate the site for the use of up to two stormwater BMPs and perform conceptual sizing and grading.

Century will prepare a SWM concept report including a brief narrative describing the SWM requirements as well as the location/types of up to two stormwater BMPs. Century will define the locations on the plans and prepare preliminary notes and details for construction. Preliminary Design level construction cost estimates will be developed. Century will prepare SWM Concept submission to MDE

Century will prepare a boring request identifying boring locations where existing groundwater levels and infiltration rates are to be determined and submit to SHA for SHA or others contracted by SHA to perform.

Erosion and Sediment Control Design

Century will prepare a preliminary Limit of Disturbance (LOD) and sequence of construction at this phase. It is assumed that all sidewalk work will utilize same day stabilization as the E&S approach.

Task 4 –Final Design (100% Design Phase)

Century will review Preliminary Phase comments from SHA and MDE and proceed with Final Design. The Final Design will address all Preliminary Phase comments and complete the design.

Century will prepare the following SWM and E&S items and submit to SHA-HHD for their review and comment. After SHA-HHD acceptance, a submission to MDE will be made. Two (2) submissions to MDE are anticipated during this phase.

The Final Design will include the following:

Stormwater Management Design

Century will revise the SWM analysis/design to reflect minor modifications to the sidewalk layout resulting from the preliminary design comments as well as the results of the geotechnical investigation. Century will finalize the locations, sizing and grading of the stormwater BMPs and develop plans, notes and details necessary for construction. Century will prepare the final SWM report including SWM computations, mapping, variance requests, Water Quality Summary Sheet and outfall documentation.

Erosion and Sediment Control Design

Century will prepare final E&S design including the LOD and sequence of construction. It is assumed that all sidewalk work will utilize same day stabilization as the E&S approach and no special details will be required.

ASSUMPTIONS/EXCLUSIONS

1. There will be no loss of water quality due to conversion from open section to closed section roadway.
2. A variance from stormwater quantity management is acceptable.

3. Century assumes that no impacts to wetlands and/or waters of the U.S. will occur for this project and therefore; no Joint Permit Application is included under this scope of services.
4. The Town of Garrett Park will complete coordination with the necessary environmental and resource agencies and will be responsible for submittal of the construction plans to SHA's Office of Planning for issuance of the NEPA document. This scope does not include any services to address any findings or impacts determined by the resource agencies review process.
5. Open and closed system storm drainage design is excluded.
6. It is assumed that all existing outfalls are stable and no analyses or stabilization design is included.
7. Erosion and Sediment control to be addressed by same day stabilization.
8. No special provisions are included.
9. Three submissions to HHD/MDE anticipated for sediment and stormwater approval.

Administration: State Highway
 Contract No.: Preliminary and Final Engineering
 Design Services, Statewide
 BCS 2011-09B, Task 16

Prepared by: RQ
 Date: 7/23/14
 Consultant: Century Engineering, Inc.
 Subcontractor:

Phase of Task Function or Total Summary: Garrett Park SRTS - H&H

Manhour Estimate				
TASK	Project Manager	Project Engineer	Designer	TOTAL
1 Review Existing Data/Field Work Preparation				
A Research/review available base information	2	4	4	10
B Kick-off meeting		0	0	6
C Prepare for field investigation	1	4	4	9
Sub-total	9	8	8	25
2 Drainage Site Assessment				
A Perform field investigation.	0	8	8	16
B Identify potential BMP location/types and coordinate with HHD.	2	9	0	10
Sub-total	2	18	8	28
3 Preliminary Design (30%)				
A Storm Drain Analysis	1	4	4	9
B Stormwater Management Design				
Identify POI locations and drainage divides (assume 9 POIs)	0	4	6	10
Prepare Water Quality mapping and summary sheet	1	6	8	15
Locate up to two BMPs and perform sizing requirement calculations	2	12	8	22
Prepare conceptual grading of BMPs	2	16	6	24
Prepare model file of BMPs to be shown on roadway plans with preliminary notes/details	1	4	8	13
Prepare conceptual SWM Report and submittal package for SHA-HHD and MDE	4	20	20	44
Prepare survey and boring request.	1	4	3	8
C Erosion and Sediment Control Design				
Prepare preliminary LOD and sequence of construction	2	8	8	14
D Assist with preparation of cost estimate	1	4	4	9
Sub-total	15	80	73	168
3 Final Design (100%)				
A Storm Drain Analysis: update for design changes and comments	1	4	4	9
B Stormwater Management Design				
Refine POI locations and drainage divides	1	1	2	4
Revise Water Quality mapping and summary sheet	1	3	6	10
Update sizing requirement calculations	0	4	4	8
Prepare final grading of BMPs	2	20	16	38
Prepare plan, details and notes for BMPs (assume bio-swailes or grass swales)	4	20	16	40
Prepare final SWM Report and submittal package for SHA-HHD and MDE	2	16	16	34
Address comments from HHD and MDE and resubmit for final approval	1	8	8	17
C Erosion and Sediment Control Design				
Prepare final LOD, sequence of construction and notes/details	2	8	12	22
D Assist with preparation of cost estimate	1	4	4	9
Sub-total	15	88	88	191
GRAND TOTAL	41	192	177	410



Sabra, Wang & Associates, Inc.

Engineers • Planners • Analysts

July 23, 2014

Mr. Anthony R. Frascarella, P.E., Vice President
Century Engineering, Inc.
10710 Gilroy Road
Hunt Valley, Maryland 21031

Reference: SHA Contract BCS 2011-09 B, Task No. 16
FMIS No.: HS206B21

Subject: Safe Route to School (SRTS) Garrett Park: Pedestrian Facility Design
Services
SWA File: 14-01-Task 16

Dear Mr. Frascarella:

Per your request Sabra, Wang & Associates, Inc. is pleased to submit for your review and approval the scope of work and the man-hours cost proposal to prepare PI (30%) and PS&E (100%) full size plans and estimate for the construction or reconstruction of following pedestrian facilities located in the Town of Garrett Park in Montgomery County:

- 1) Oxford Street from the end of the existing sidewalk at the corner of Oxford and Montrose to Oxford and Weymouth, on the south side of roadway;
- 2) Kenilworth Avenue, starting at the end of the existing sidewalk located at the intersection of Kenilworth and Waverly, and extending the sidewalk to Kenilworth and Argyle, on the west side of the roadway; and
- 3) Clermont/Montrose Avenues, from Clermont and Strathmore to Clermont and Montrose on the west side of the roadway, and along Montrose on the east side one block to Waverly.

Estimated length of this project is about 0.8 miles for all three sites. The scope of work will include the followings:

□ **PI Review Submittal (30%):**

- Paint baseline stationing along the outside edge of the existing roadway throughout the entire limits of work.
- Conduct field investigation to gather existing roadway information and become familiar with the existing site conditions.
- Conduct field investigation to gather existing surface utilities information and show adjustments to the existing private and/or public utilities are necessary either by location or by notes on the roadway plans.
- Provide proposed ground mounted signs and crosswalk marking as needed.

- Develop base plans based on GIS information provided by SHA and from field inventory.
 - Evaluate existing vegetation area and note the vegetation that is impacted.
 - Prepare title sheet, abbreviation sheet, typical sections, MOT general notes, roadway plans, ramp details, driveway details, and pavement details as provided by SHA. Develop horizontal alignment to be used as a reference only.
 - Develop right of way line based on the Montgomery County's electronic GIS information.
 - Develop quantities and cost estimate.
 - Coordination and meetings with Century, the Town of Garrett Park, and SHA staff.
 - Attend PI office and/or field review meetings.
 - Attend public hearing meeting and provide supporting materials.
- **PS&E Submittal (100%):**
- Address PI comments and update title sheet, typical sections, paving details and roadway plans accordingly.
 - Submit for ADA waiver and 5 right-of-entry plans.
 - Address PI comments and update quantity tables and estimate accordingly.
 - Coordination and meetings with Century, the Town of Garrett Park, and SHA staff.
 - Paint baseline stationing along the outside edge of the existing roadway throughout the entire limits of work before advertisement.
- **Assumptions and Clarifications:**
- This proposal does not include any phase V services, structure, signal design, landscape design, lighting design, SWM, and E&S designs. Special provisions will not need to be developed for this assignment.
 - It is assumed that no field survey of the existing roadway will be conducted.
 - No separate signing and pavement marking plans are required for this task. All signs and pavement markings will be shown on the roadway plans.
 - SWA does not intend to develop MOT plans, cross sections, and grading table. The contractor will be requested to use standard MDSHA MOT standards.
 - This proposal does not include Semi Final and Final submittals.
 - The Town of Garrett Park will be responsible for setting and re-establishing the construction baselines used for construction.
 - The Town of Garrett Park will be responsible for all construction inspection. Field visits to assist the contractor with the layout of the proposed upgrades are not included nor are construction meetings.
 - Any pavement design, field surveys beyond those listed above, utility designating, test holes, utility relocation design, roadway cores, soil borings

Mr. Anthony R. Frascarella, PE
July 23, 2014
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and/or wetland delineations required will be performed/provided by SHA or others contracted by SHA.

- This task will not include the preparation of milestone reports traditionally developed for SHA projects since the milestone submissions (i.e. PI, Semi-Final, etc) will not be part of the contract document submission process.
- Obtaining tree permits will be performed by the Town of Garrett Park.
- SWA does not intend to perform right of way research based on as built plans and/or plat.
- SWA does not intend to perform right of way research based on as built plans and/or plat.

Please review the scope of work and the attached cost proposal at your convenience. I look forward to working with you and your staff on this assignment. If you need any additional information, please call me at (443) 741-3701.

Sincerely,

SABRA, WANG & ASSOCIATES, INC.



Ray Dagher, P.E.
Director, Civil Engineering

Sabra, Wang & Associates, Inc.
 Man-Hour Estimate & Cost Proposal
 Preparing Preliminary and PS&E Plans for Safe Route to School (SRTS) Garrett Park: Pedestrian Facility Design Services
 BCS 2011-09 B, Task No. 16
 SVA File: 14-01-Task 16
 7/23/2014

TASK	CLASSIFICATION					Subtotal
	Supervisor/ Principal	Project Manager	Project Engineer	Designer	CADD Technician	
Preliminary Investigation						
Paint baseline stationing along the outside edge of the existing roadway throughout the entire limits of work			4	16		20
Conduct field investigation to gather existing roadway information and become familiar with the existing site conditions.		4	8	60	60	132
Conduct field investigation to gather existing surface utilities information and show adjustments to the existing private and/or public utilities are necessary either by location or by notes on the roadway plans.		4	8	40	30	82
Provide proposed ground mounted signs and crosswalk marking as needed.		4	8	16	20	48
Develop base plans based on GIS information provided by SHA and from field inventory.		4	8	50	80	152
Evaluate existing vegetation area and note the vegetation that is impacted.			4	8	16	28
Prepare title sheet, abbreviation sheet, typical sections, MOT general notes, roadway plans, ramp details, driveway details, and pavement details as provided by SHA. Develop horizontal alignment to be used as a reference only.		40	140	180	160	520
Develop right of way line based on the Montgomery County's electronic GIS information.		4	8	24	24	60
Develop quantities and cost estimate.		4	16			20
Coordination and meetings with Century, the Town of Garrett Park, and SHA staff.		8	16			24
Attend PI office and/or field review meetings.		6	6			12
Attend public hearing meeting and provide supporting materials.		8	8	16	16	48
PS&E Submittal (100%):	0	56	234	420	406	1146
Address PI comments and update title sheet, typical sections, paving details and roadway plans accordingly		24	64	40	88	216
Submit for ADA waiver and 5 right-of-entry plans.		8	20	16	24	68
Address PI comments and update quantity tables and estimate accordingly		8	16	8	8	40
Coordination and meetings with Century, the Town of Garrett Park, and SHA staff.		8	16			24
Paint baseline stationing along the outside edge of the existing roadway throughout the entire limits of work before advertisement.			4	16		20
SUBTOTAL	0	48	120	80	120	368
TOTAL	0	134	354	500	528	1614
Approved Hourly Rate (\$)	\$ 80.00	\$ 50.59	\$ 37.90	\$ 27.72	\$ 21.35	
Total Labor Cost (\$)	\$ -	\$ 6,778.08	\$ 13,416.50	\$ 13,860.00	\$ 11,230.10	\$ 34,055.68
Overhead Rate (91.64%)		\$ 6,212.33	\$ 12,284.97	\$ 12,701.30	\$ 10,291.28	\$ 31,208.81
Sub-total (Labor & Overhead)		\$ 12,990.41	\$ 25,701.47	\$ 26,561.30	\$ 21,521.38	\$ 65,264.27
Fee (21% of Labor)		\$ 1,423.60	\$ 2,817.48	\$ 2,910.60	\$ 2,358.32	\$ 7,151.69

Direct Cost:
 Direct Cost (1200 miles @ \$6+ \$ 1500 printing)
 Total Cost (\$\$)

\$ 2,172.00
 \$ 74,587.96

**MARYLAND DEPARTMENT OF TRANSPORTATION
COST AND PRICE SUMMARY - CONSULTANT SERVICES CONTRACT**

Administration: State Highway Administration Consultant: _____
 Project: Garrett Park Subcontractor: Sabra Wang & Associates
 Contract No.: BCS 2011-09 B, Task No. 16

Phase or Task function or Total Summary: Task 16 Preparing Preliminary and PS&E Plans
for Safe Route to School (SRTS) Garrett Park Pedestrian Facility Design Services

1.	Direct Labor	<u>1,514</u>	Manhours X	<u>\$ 22.49</u>	Average Hourly Rate	<u>\$ 34,055.66</u>
2.	Escalation:	<u>0.00% of Item 1</u>				<u>\$ -</u>
						Subtotal
3.	Payroll Additives:	P.B.	<u>91.64% of Item 1 & 2; Append Itemization</u>			<u>\$ 31,208.61</u>
		O.H.	<u>_____ of Item 1 & 2; Append Itemization</u>			<u>\$0.00</u>
4.	Total of Items 1, 2 and 3 above:					<u>\$ 65,264.27</u>
5.	Fixed Fee a. Dollar amount to cover Profit and other factors					
	b. Line 5a represents <u>21%</u> of Line 2					<u>\$ 7,151.69</u>
6.	Direct Expenses: Append justification if necessary					
	a. Local Travel	<u>1200</u> miles at	<u>\$0.560</u> per mile			<u>\$ 672.00</u>
	b. Long Distance Travel, if required					
	c. Printing					<u>\$ 1,500.00</u>
	d. Computer (documentation mandatory)					
	e. Principal Time	<u>0</u> hours at	<u>\$ 80.00</u>			<u>\$ -</u>
	f.					
	g.					
	Total Direct Costs					<u>\$ 2,172.00</u>
						<u>\$ 2,172.00</u>
7.	Subcontractor: Separate Cost and Price Summary for each firm to be appended					
	Name					Amount
a.	<u>N/A</u>					<u>\$ -</u>
b.	_____					
c.	_____					
	Total					<u>\$ -</u>
						<u>\$ -</u>
8.	Other (specify):					
a.	_____					
b.	_____					
c.	_____					
	Total					<u>\$ -</u>
						<u>\$ -</u>
9.	Total Proposed Fee for this PROJECT TASK					<u>\$ 74,587.96</u>
10.	Will your firm accept this portion on a LUMP SUM basis? YES NO X					
	If YES, in what amount? _____					

AVERAGE HOURLY RATE

11.	Classification	Average Hourly Salary		Hours	Extension
1	ProjectManager	\$ 50.59	x	134	\$ 6,779.06
2	ProjectEngineer	\$ 37.90	x	354	\$ 13,416.60
3	Designer	\$ 27.72	x	500	\$ 13,860.00
4	CADD Technician	\$ 21.35		526	
5			x		
6			x		
7			x		
8			x		
9			x		
10			x		
11			x		
12			x		
13			x		
14			x		
			TOTAL	1514	\$ 34,055.66

Average Rate equals Extension divided by Hours 22.49